

Claims:

1. An ablation system, comprising:

generating means for generating ablation energy;

5 an ablation device comprising a plurality of ablation elements connectable to the generating elements and locatable adjacent a tissue site to be ablated, for applying the generated ablation energy to the tissue site;

a plurality of electrogram measuring electrodes mounted to the ablation device so that at least one of the electrogram measuring electrode is adjacent the tissue site
10 when at least one of the ablating elements is adjacent the tissue site;

electrogram measurement circuitry connectable to the electrogram measuring electrodes; and

control circuitry operably coupled to the generating means to initiate and terminate the application of ablating energy to each of the plurality of ablating
15 elements, wherein the control circuitry is coupled to the electrogram measurement circuitry and selectively terminates application of ablation energy to the ablating elements, said selective termination of ablation energy occurring at at least one of the ablating elements adjacent the tissue site responsive to the electrogram measured by the electrogram measuring circuitry at an electrogram measuring electrode at the
20 tissue site following initiation of application of ablating energy to the ablating element.

2. A system as in claim 1 wherein the ablating element is an ablation electrode and wherein the generating means comprises an R-F generator.

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3. A system as in claim 2 wherein the ablation electrode is an irrigated ablation electrode.

4. A system as in claim 2 wherein the ablation electrode is employed as the
30 electrogram-measuring electrode.

5. A system as in claim 1 wherein the electrogram measurment circuitry is electrogram amplitude measurement circuitry.

6. A system as in claim 5 wherein the application of ablation energy is terminated
5 in response to a measured plateau in electrogram amplitude.

7. A system as in claim 5 wherein the application of ablation energy is terminated in response to a measured drop in electrogram amplitude.

10 8. An ablation system, comprising:
generating means for generating ablation energy;
an ablation device comprising a plurality of ablation elements connectable to the generating elements and locatable adjacent a tissue site to be ablated, for applying the generated ablation energy to the tissue site;
15 a plurality of electrogram measuring electrodes mounted to the ablation device so that at least one of the electrogram measuring electrode is adjacent the tissue site when at least one of the ablating elements is adjacent the tissue site;
electrogram measurement circuitry connectable to the electrogram measuring electrodes; and
20 control circuitry operably coupled to the generating means to reduce the application of ablating energy to each of the plurality of ablating elements, wherein the control circuitry is coupled to the electrogram measurement circuitry and selectively reduces application of ablation energy to the ablating elements, said selective reduction of ablation energy occurring at at least one of the ablating elements
25 adjacent the tissue site responsive to the electrogram measured by the electrogram measuring circuitry at an electrogram measuring electrode at the tissue site following initiation of application of ablating energy to the ablating element.

9. A system as in claim 8 wherein the ablating element is an ablation electrode
30 and wherein the generating means comprises an R-F generator.

10. A system as in claim 9 wherein the ablation electrode is an irrigated ablation electrode.

5 11. A system as in claim 9 wherein the ablation electrode is employed as the electrogram-measuring electrode.

12. A system as in claim 8 wherein the electrogram measurment circuitry is electrogram amplitude measurement circuitry.

10 13. A system as in claim 12 wherein the application of ablation energy is reduced in response to a measured rapid drop in electrogram amplitude.

14. A method of ablation, comprising:
applying ablation energy to a tissue site by a plurality of ablation elements;
15 monitoring an electrogram at a plurality of electrogram measurement electrodes at the tissue site; and
responsive to the monitored electrogram, selectively reducing the level of ablating energy applied by the ablation elements to the tissue site.

20 15. A method as in claim 14 wherein the ablation elements comprise RF electrodes.

16. A method as in claim 15 wherein the monitoring of the electrogram at the tissue site comprises monitoring the electrogram using the R-F electrode.

25 17. A method as in claim 15 wherein the applying of R-F energy to the tissue site comprises applying R-F energy using an irrigated R-F electrode.

30 18. A system as in claim 14 wherein the monitoring of the electrogram comprises monitoring electrogram amplitude.

19. A method as in claim 18 wherein the application of ablation energy is reduced in response to a drop in electrogram amplitude.